

APPENDIX D
GLOSSARY

Administrative Controls

Use of information, training, shift schedules, work practices, housekeeping, and monitoring to reduce or eliminate exposures.

Airborne

Word used to describe something that is in the air.

Air-Purifying Respirator

Type of personal protective equipment that uses a special **filter** or chemical cartridge to remove specific airborne hazards from contaminated air before the wearer inhales it.

Air-Supplied Respirator

Type of personal protective equipment that supplies the air that the wearer breathes; includes self-contained breathing apparatus and hose-type supplied-air units.

Barrier Cream

Protective cream applied to the skin to protect against skin contact/absorption **hazards**; **often** used in addition to gloves.

Boiling Point

Temperature at which a liquid changes into a gas.

Carcinogen

Health hazard that causes cancer in the exposed individual.

Chemical Container

Bags, barrels, bottles, boxes, cans, cylinders, drums, reaction vessels, storage tanks, and other vessels used to hold chemicals.

Chemical Formula

Way of **identifying** chemical materials by showing the number of each type of atom contained in one molecule of the chemical.

Chemical Hazard

Any chemical material that can cause health problems, fire, explosion, or other dangerous situations.

Combustible Liquid

Liquid having a flash point at or above 100°F, but below 200°F.

Combustion

The process of burning.

Compressed Gas

Gas stored inside a container at a pressure much higher than normal air **pressure**; contains a lot of stored energy a physical hazard due to the potential for sudden release of the stored energy when the gas expands.

Condensation

Process by which an airborne vapor becomes a mist or fume.

Corrosive

Health hazard that burns on contact, causing visible damage and/or irreversible changes to body **tissues**; also a physical hazard that can burn through inert materials.

Cryogenic

Health hazard that freezes body tissues on contact.

Cubic Meter

A cube measuring 1 meter on each side.

Decomposition Product

Chemical that forms when a material breaks down into simpler **molecules**; maybe hazardous even if the parent material is not.

Degree of Hazard

Measure of how serious an exposure is based on what can happen as a **result**; takes into account the chemical, exposure route, dosage, number and length of exposures, and individual differences.

Delayed Effect

Health effect that appears slowly over time, rather than right **away**; can be associated with either single or repeated exposures.

Dermatitis

Cracked, broken, dry skin caused by exposure to health hazards that remove fat from the **skin**; **inflammation** of the skin caused by direct contact or systemic exposure to hazardous **chemicals**.

Dosage

Amount of chemical that enters the body over a specified period of time.

Dust

Airborne particles formed from solids.

Engineering Controls

Use of substitution, isolation, or ventilation to reduce exposure to chemical hazards and the injury or illness caused by such exposure.

Environmental Monitoring

Type of administrative control that involves collecting, measuring, and analyzing air or wipe samples of chemical substances to determine whether a hazard exists, or whether a known hazard is being effectively controlled.

Esophagus

Tube that leads from the throat to the stomach.

Evaporate

Process by which liquids change into the vapor form.

Evaporation Rate

Physical data on the MSDS that describes how fast a liquid evaporates in comparison to a standard having a rate of 1.

Explosive

Chemical material that can undergo a sudden and violent release of pressure and heat.

Explosive Limits

Data on the MSDS that define the ranges of **air-chemical** mixtures that can explode when exposed to an ignition **source**; see Upper and Lower Explosive Limits.

Exposure Limit

The maximum amount of chemical in a given volume of air to which workers maybe exposed, as averaged over a **specified** period of time. Most people can be exposed to this airborne limit for an entire working lifetime without developing health effects.

Exposure Symptom

Health effect produced by exposure to a chemical material, such as headache or skin irritation.

Extinguishing Medium

Chemical used to put out a fire.

Eye Contact Hazard

Chemical material that damages or irritates the eye on contact or is systemically absorbed (with either with the bulk chemical or its airborne forms), or that can be absorbed through the eyes; an exposure route.

Chemical Family

Name given to a group of chemicals having related structures or properties (e.g., aliphatic hydrocarbons).

Fire Hazard

Chemical material that ignites and burns easily, or that cause or supports fire in other materials; includes **pyrophorics**, **flammables**, combustibles, and oxidizers.

Flammable Liquid

Liquid having a flash point below 100°F.

Flash Point

Lowest temperature at which a liquid gives off enough vapor to ignite in the presence of an ignition source.

Fume

Tiny airborne particles that can form when a solid is melted.

Gas

Physical form of a chemical that is easily compressed and expands to fill its container; has a boiling point below room temperature.

General Ventilation

Type of ventilation system that is used to mix an airborne hazard with fresh air to dilute it and reduce its concentration to safe levels.

Hazard Communication Program

Written document that describes how an employer or facility complies with all requirements of the Federal Hazard Communication Standard (29 CFR 1910.1200).

Hazard Communication Standard

Federal law developed by OSHA to reduce illness and injury caused by chemical hazards in the workplace; requires evaluation of chemical hazards and communication of hazard information to both employers and employees.

Hazard Determination (or Evaluation)

Process of finding out whether a chemical material is hazardous and what the hazards are.

Hazardous Chemical Inventory

List of all hazardous chemicals known to be present in a given workplace; identity/name of chemicals used on this list must match the identity/name used on the warning labels and MSDSs.

Hazardous Ingredient

Chemical in a mixture that presents either a physical hazard or a health hazard.

Health Hazard

Any chemical material that can cause illness or injury when a person is exposed by ingestion, skin or eye contact, skin absorption, or inhalation.

High Toxicity

Description applying to chemicals that can produce either life-threatening or seriously disabling health effects.

Housekeeping

An administrative control that involves containing and removing chemical hazards — e.g., vacuuming, proper storage and handling, prompt removal and correct disposal of chemical wastes.

IARC

International Agency for Research on Cancer.

Immediate Effect

Health effect that appears right away — either during the exposure or shortly afterwards.

Industrial Hygienist

Expert in the recognition, evaluation, and control of safety and health hazards.

Ingestion

The way that a chemical enters the body if you swallow it; an exposure route.

Ingredient

See Hazardous Ingredient.

Inhalation

The way that a chemical enters the body when you breathe it through your nose or mouth; an exposure route.

International Agency for Research on Cancer (IARC)

Agency that evaluates the research data on substances tested for their carcinogenic potential. IARC publishes information on carcinogens and potential carcinogens. The IARC listing is one of the references that must be used to identify cancer-causing chemicals on MSDSS.

Irritant

Health hazard that reacts with body tissues at the point of contact causing reddening, itching, tearing, irritation, and/or minor inflammation.

Isolation

Engineering control that involves using an enclosure, barrier, or safe distance to separate workers from exposure hazards.

LEL

See Lower Explosive Limit.

Liquid

Physical form of a chemical that has no definite shape, but takes the shape of its container; has a boiling point above room temperature.

Local Exhaust Ventilation

Type of ventilation system that captures an airborne hazard as it is released at the source and takes it out of the workplace.

Low Toxicity

Description applying to chemicals that produce only minor health effects — effects that usually go away with or without medical attention when exposure stops.

Lower Explosive Limit (LEL) -

Data on the MSDS that defines the minimum amount of airborne chemical that must be present in an air-chemical mixture to make it explosive.

Material Safety Data Sheet (MSDS)

Written document that identifies a chemical **material**; gives its physical properties describes known physical **hazards**, health hazards, and required controls; and identifies correct procedures for putting out fire, cleaning up a **spill** or leak, disposing of waste, and handling/storing the material safely.

Medical Monitoring

Type of administrative control that involves physical **examinations** and/or lab tests to establish an individual's baseline health status and check the effectiveness of other controls used to protect an individual from health hazards.

mg/m³

See Milligrams Per Cubic Meter.

Milligrams Per Cubic Meter (mg/m³)

Unit used to express exposure **limits**; defines the mass of chemical contaminant^t (in milligrams) allowed in each cubic meter volume of air.

Mist

Airborne form of a liquid **chemical**; consists of tiny droplets.

Mixture

Material that contains more than one chemical.

Moderate Toxicity

Description applying to chemicals that produce **health** effects requiring medical attention, damage maybe permanent but is neither life-threatening nor seriously disabling.

Monitoring

An administrative control that checks the effectiveness of other controls by analyzing air samples, wipe samples, and personal exposure **levels**; may involve medical monitoring.

MSDS

See Material Safety Data Sheet.

Mutagen

Reproductive hazard that causes genetic changes in sperm or egg cells.

National Toxicology Program (NTP)

Organization that **funds** and conducts research on chemical substances. **NTP** publishes **lists** of carcinogens and potential carcinogen, this list is one of the reference sources that must be used to **identify** cancer-causing chemicals on **MSDSs**.

NTP

See National Toxicology Program.

Occupational Safety and Health Administration (OSHA)

Federal agency within the Department of Labor that develops and enforces standards for workplace safety and health.

OSHA

See Occupational Safety and Health Administration.

Oxidizer

Chemical material that supplies the oxygen required to start or support fire. Common oxidizers include chlorine gas, oxygen and peroxides.

Parts Per Million (ppm)

Unit used to express exposure **limits**; defines parts of the chemical allowed in each one million (1,000,000) **parts** of the **air-chemical mixture**.

PEL

See Permissible Exposure Limit.

Permissible Exposure Limit (PEL)

Exposure limit set and enforced by **OSHA**. (See Exposure Limit).

Personal Monitoring

Type of administrative control that involves the worker's wearing a badge or other sampling device to measure exposure to a chemical hazard in the workplace.

Personal Protective Equipment (PPE)

Equipment that protects the individual who wears it by placing a barrier between that individual and a **hazard**; includes protective eyewear, face shields and masks, gloves, boots, hats, clothing, and respirators.

Physical/Chemical Characteristics

Information on the MSDS that describes the appearance, odor, boiling point, vapor pressure, vapor density, evaporation rate, **specific** gravity, and water solubility of a chemical material.

Physical Hazard

Any chemical material that can cause **fire**, explosion, violent chemical reactions, or other similarly hazardous situations.

Polymerization Hazard

Unstable chemical that undergoes a violent reaction and release of energy that produces or releases a hazard when two or more small molecules combine (self-react) to form large molecules called polymers.

PPE

See Personal Protective Equipment.

PPM

See Parts Per Million.

Pyrophoric

Chemical material that spontaneously bursts into **flame** when exposed to air at temperatures below 130°F; no ignition source is needed.

Reactive Chemical

Material that reacts violently on contact with certain other chemical materials to produce or release a hazard.

Recommended Exposure Limit (REL)

Exposure limit recommended by the National Institute for Occupational Safety and Health (NIOSH).

REL

See Recommended Exposure Limit.

Reproductive Hazard

Health hazard that targets the human reproductive system, category that includes teratogens and mutagens.

Sensitizer

Health hazard that produces an allergic-like reaction in some people after repeated exposure.

Skin Absorption

Way that some chemicals pass through the skin on contact and enter the bloodstream; an exposure route.

Skin Contact Hazard

Chemical material that damages or irritates the skin on contact; an exposure route.

Smoke

An airborne mixture of fire gases, dust, and fumes.

Solid

Physical form of a chemical that has a **definite** shape.

Volubility in Water

Physical data element on the MSDS that describes whether or not a material dissolves in water.

Specific Gravity

Physical data on the MSDS that describes whether a liquid is lighter or heavier than water.

Substitution

Engineering control that involves replacing a chemical, process, or piece of equipment with a less hazardous one.

Target Organ Chemical

Health hazard that enters the bloodstream and damages specific internal organs or body system, effects can be delayed.

Teratogen

Reproductive hazard that damages the fetus during **its** development.

Threshold Limit Value (TLV)

Exposure limit recommended by the American Conference of Governmental Industrial Hygienists (ACGIH). (See Exposure Limit).

TLV

See Threshold Limit Value.

Toxicity

Description of the degree of health hazard associated with exposure to a chemical; see Low, Moderate, and High Toxicity.

Transfer Container

Chemical container that does not require labels because only one person handles the container, and it is filled and emptied during the same shift.

UEL

See Upper Explosive Limit.

Unstable Chemical

Material that violently self-reacts under commonly occurring condition a type of physical hazard.

Upper Explosive Limit (UEL)

The maximum amount of airborne chemical that can be present in an air-chemical mixture and still have it be explosive.

Vapor

One airborne form of a liquid chemical.

Vapor Density

Physical data that describes whether the vapor formed by a material is lighter or heavier than air.

Vapor Pressure

Force exerted on the walls of a closed container of liquid by vapor formed above the liquid surface.

Vaporization

Process by which liquids become airborne.

Ventilation

Engineering control that reduces airborne exposure levels either by mixing the hazard with fresh air, or by removing it as it is released at the source.

Warning Label

Document affixed to chemical containers (or posted by stationary containers) that identifies the chemical material and all appropriate hazard warnings.

Water-Reactive

Chemical material that reacts with water or moist air to produce or release a hazard.

Work Practices

Procedures normally used to do the job.